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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,616	06/23/2005	Joannes Theodorus Maria Linders	PRD2023USPCT	2040

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EXAMINER

CHU, YONG LIANG

ART UNIT	PAPER NUMBER
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1626

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/540,616

Applicant(s)

LINDERS ET AL.

Examiner

Yong Chu

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-14 and 16-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-10, 12, 14, 16-22, 25, 28, 29 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 23, 24, 26, 27, 30, and 32 is/are rejected.
- 7) ☒ Claim(s) 13, 23, 24, 26, 27, 30 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/14/2005.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claims 1-10, 12-14, and 16-32 are pending in the instant application.

Information Disclosure Statement

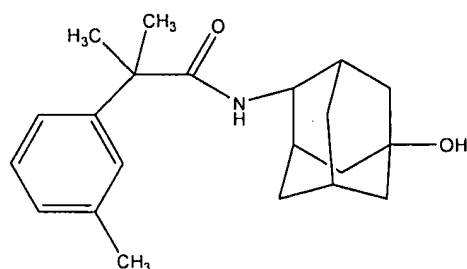
Applicants' Information Disclosure Statement, filed on 14 October 2005, has been considered. Please refer to Applicant's copies of the PTO-1449 submitted herewith.

Priority

This application is a 371 of PCT/EP03/51021 filed on 16 December 2003.

Response to Restriction

Applicants' election with traverse of Group VII (claims 13 and 16) by Applicant's representative David Knasiak in the reply filed on 28 August 2006 is acknowledged. During the phone conversation with Mr. Knasiak on 10 October 2006, Applicant further elected product claim 13 for further examination with elected species of compound 120



in table 1 on page 75 of the specification for initial search purpose.

Response to traverse

Applicant's traversal is on the ground(s) that the examination of the entire application can be made without burden. The traverse is fully considered, but is found not persuasive. As stated in the previous Office action, the claimed subject matters contain very diverse compounds, which are classified under different class and subclasses, and require different searches. For example, **Q** in formula (I) of claim 1 represents Het¹ as pyridinyl (546), indolyl (548/469), oxazolyl (548/215). It has serious burden for the Examiner to consider the entire application. Therefore, the restriction requirement is appropriate, and is maintained.

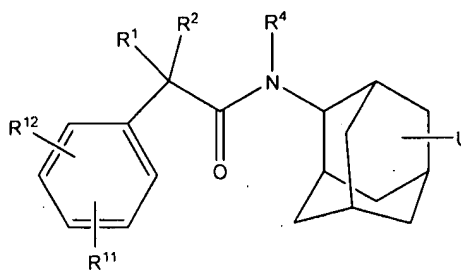
Status of the Claims

Claims 1-10, 12, 14, 16-22, and 31 are further withdrawn from further consideration by the Examiner as being drawn to non-elected inventions under 37 CFR 1.142(b) as result of the restriction requirement. The withdrawn subject matter is patentably distinct from the elected subject matter as it differs in structure and/or element and would require separate search considerations. In addition, a reference that anticipates one invention would not render obvious the other invention.

Elected and Examined Subject Matter

The scope of the invention of the elected subject matter and the examined subject matter is as follows:

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Compounds of the Formula (I')

in claim 13,

wherein:

 R^1 and R^2 each independently represent H, or C_{1-4} alkyl; R^4 is hydrogen or C_{1-4} alkyl; U is H or hydroxyl; and R^{11} and R^{12} each independently represent H, or C_{1-4} alkyl.

As a result of the election and the corresponding scope of the invention identified supra, claims 25, 28-29, 31 and the remaining subject matter of claims 13, 23, 24, 26, 27, 30, and 32 are withdrawn from further consideration pursuant to 37 CFR 1.142 (b) as being drawn to non-elected inventions. The withdrawn compounds contain varying functional groups, which are chemically recognized to differ in structure, function, and reactivity.

Therefore, claims 13, 23, 24, 26, 27, 30, and 32 will be examined on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

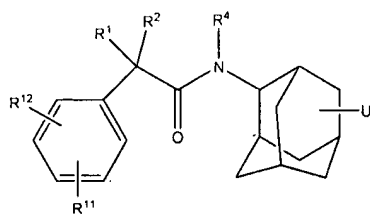
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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13, 23, 24, 26, 27, 30, and 32 are rejected under 35 U.S.C. 103 (a) as unpatentable over Lavrova et al., *Zhurnal Organicheskoi Khimii* (1974), 10(4), 761-5 in view of Naruto et al. EP 399814.

Applicants' claims relate to the compounds of formula (I')



in claim 13, wherein:

R¹ and R² each independently represent H, or C₁₋₄alkyl;

R⁴ is hydrogen or C₁₋₄alkyl;

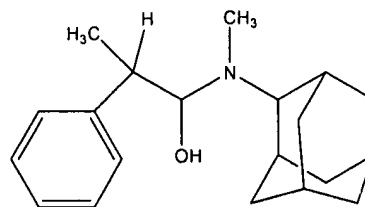
U is H or hydroxyl; and

R¹¹ and R¹² each independently represent H, or C₁₋₄alkyl.

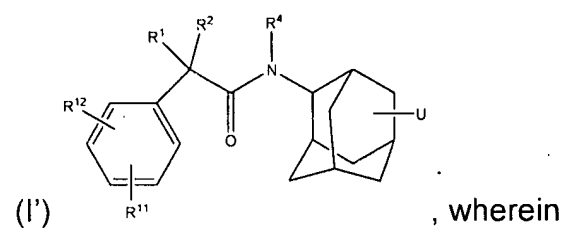
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Determination of the scope and content of the prior art (MPEP §2141.01)

Lavrova et al. disclose the specific compound



(CAS CN 52917-70-1), which is related to the instantly claimed compounds of formula

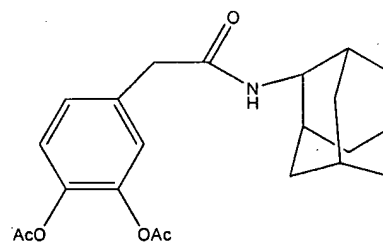


R^1 is H; R^2 is C_1 alkyl;

R^4 is C_1 alkyl;

U is H; and

R^{11} and R^{12} are each H.



Naruto et al. disclose the specific compound

(CAS CN 134122-91-1).

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between Lavrova prior art and the instantly claimed compounds is that the prior art does not teach a carbonyl ($O=C$) compound attaching on $-NH$ group, as claimed compounds of the instant claims. Instead, the prior art teach a compound with hydroxyl group carbon ($HO-C-$) attached on the carbon.

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Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)

The instantly claimed compounds would have been obvious over the prior art compounds in Lavrova prior art in view of the disclosure of Naruto compound having the carbonyl group at the related position with similar core structure with a pharmaceutical utility as anti-viral agent. To those skilled in the chemical art, one homologue is not such an advance over adjacent member of series as requires invention because chemists knowing properties of one member of series would in general know what to expect in adjacent members. *In re Henze*, 85 USPQ 261 (1950). One skilled in the art would have found the claimed compound prima facie obvious because it is well established that the substitution of methyl for hydrogen on a known compound is not a patentable modification absent unexpected or unobvious results. The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (i.e. pharmaceutical use).

Because the compound claims are unpatentable, the composition claims comprising the said compound are unpatentable either.

Claim Objections

Claims 13, 23, 24, 26, 27, 30, and 32 are objected to for containing elected and non-elected subject matter. The elected subject matter has been identified supra. Applicant should amend the claims according to the scope of the invention.

Conclusion

No claims are allowed.

Claims 13, 23-24, 26-27, 30, and 32 are rejected.

Claims 13, 23-24, 26-27, 30, and 32 are objected.

Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Chu whose telephone number is 571-272-5759.

The examiner can normally be reached between 7:00 am - 3:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in cursive script, appearing to read "Yong Chu", written over a horizontal line.

Yong Chu, Ph.D.
Patent Examiner
Art Unit 1626

A handwritten signature in cursive script, appearing to read "Joseph K. McKane", written over a horizontal line.

Joseph K. McKane
Supervisory Patent Examiner
Art Unit 1626